

[0115] An application of an embodiment of the present invention can entail installation of conventional photovoltaics on the surface of barrier walls, guard rails, and so forth. Methods of doing this have been devised so as to be able to transfer electrical current to ferris bearing substrates attached to the road surfaces via electrical coils to create magnetic fields. Electric cars can then be provided having an inductive coupling device attached to the subframe, and which are tied electrically through diodes to an onboard charging device. Since the charging medium is a long range magnetic field, having an inductive coupling device that is maintained at certain heights with regards to the charging medium is not as necessary as it is for a short distance charging system, such as buried electrical cable in the roads.

[0116] In another exemplary embodiment of the present invention, the introduction of thermal and/or photonic harvesting materials bonded to any type of magnetic material via the use of electrolytic material such as certain epoxies, can occur. Like the first application, a film of rubber and a Ferris substrate would precede the application of an electrolytic and photovoltaics covered over by a film of PFTEE that passes more of the correct wavelength than does glass. Provisions can then be made to use augmentation by photovoltaics. Application of the photovoltaics to the substrate can yield a Fractal surface, proven to be more effective at wave length capture than a flat or parabolic conformity.

[0117] In yet another exemplary embodiment of the present invention, the composition could be air blasted onto a quick setting solution that would contain all conductors and/or magnetic material in the solution. Magnetic field orientation could be a one time process by passing a magnet over the solar harvesting strips. If the gates are bonded to a magnetic material on the negative side of the gates, positive gate orientation could be accomplished by passing a magnet over the semi-viscous strip to orient the gates upwards.

#### Exemplary Embodiment of the Inductively Coupled Electric Vehicle

[0118] In FIG. 12, an electric vehicle 1200 is illustrated that is operable with the solar energy harvesting strip 110, according to an exemplary embodiment of the present invention. Electric vehicle 1200 may comprise a number of features that increase its efficiency. For instance, electric vehicle 1200 may comprise a regenerative braking system 1210. A regenerative braking system 1210 generates electrical energy by converting breaking force into electrical energy that may be used to power the electric vehicle 1200. Further, electric vehicle 1200 may incorporate independent electric motors 1220 at each wheel. The configuration of having one electric motor at each wheel minimizes the vehicle's weight thereby reducing the amount of energy needed to propel the vehicle. The body panels 1230 may be constructed to function as parallel plate discharge capacitors. Further, a solar energy harvesting material that converts photonic and/or thermal energy into electricity may be used for the finish coating on all body panels 1230. Additionally, all of the window glass 1240 may be coated with a clear or tinted photonic and/or thermal energy harvesting material. Further, electric vehicle 1200 includes an inductive coupling device 1250 which uses a sphere-type inductive coupling device for induction instead of a conventional plate-type inductive coupling device. Preferably, electric vehicle 1200 includes ancillary or backup electrical generation devices. Such ancillary or backup electrical generation devices may covert mechanical motion associated

with the electric vehicle 1200 into electricity. For example, when you open the door, a magnetic rod travels through a series of windings which produces electrical current. In addition, the regenerative braking system 1210 described above is another example of an ancillary or backup electrical generation device. Further, electric vehicle 1200 may be provided with a hydrogen motor 1260 that generates electricity. Electric vehicle 1200 may further include channels to collect rain water stored and used by hydrogen motor 1260. Still further, electric vehicle 1200 may be provided with photonic harvesting material underneath the chassis to allow for the conversion into electricity of photonic energy received from lights sources that are coupled to solar energy harvesting strip 110. The light sources may be embedded in the driving service 120 and/or solar energy harvesting strip 110. While electric vehicle 1200 may include all of the above features, electric vehicle 1200 may alternatively include any combination of any number of the above features as well as other features that increase its efficiency.

[0119] A conventional plate-type inductive coupling device is illustrated in FIG. 13. In operation, the conventional plate-type inductive coupling device uses flat metal plates 1310 that must be lowered from a raised position 1330 to a lowered position 1340 so as to be placed in the field 1350 of charging medium 1320 in order to cause current flow across the surface of the plates 1310. This configuration has a number of disadvantages, including potential damage to the plates due to snow, ice, debris or the like. This configuration is further problematic in that the plates 1310 must be centered over the charging medium 1320 for maximum inductive coupling.

[0120] A sphere-type inductive coupling device 1250 according to an exemplary embodiment is shown in FIG. 14. The inductive coupling device 1250 includes an inductance sphere 1410 that does not need to be raised or lowered and so may be fixed at a permanent height well above the charging medium. A sphere-type inductive coupling device is beneficial in that it has a far greater surface area than a plate-type inductive coupling device. The inductance sphere 1410 may be made of a great range of materials including any, or any combination of, soft or hard magnetic materials, dielectric materials and electro-conductive materials. Further, any type of motor, including a hydrogen motor or small internal combustion engine, may be used to spin the inductance sphere 1410 for the generation of electrical energy. When the inductance sphere 1410 is spun in the field 1420 over the solar energy harvesting strip 110, the inductance sphere 1410 accumulates a charge on its surface which in turn is transferred to the battery/storage area 1450. The inductance sphere 1410 accumulates a charge on its surface by inductance through the coil of conductors 1440 around its center. Thus, if the battery storage areas 1450 are low in charge and the vehicle is not moving, the inductance sphere 1410 may be spun to charge its batteries.

[0121] The use of multiple spheres of the same size or of different sizes results in the ability to multiply the charge effect over a large area no matter what the vehicle's position is in relation to the solar harvesting strip 110. In one exemplary embodiment illustrated in FIG. 15, a large sphere 1510 comprised of magnetic material is surrounded by several smaller spheres 1520 comprised of a dielectric material. The larger sphere 1510 may be attached to motorized or mechanical movements causing them to spin. In yet another exemplary embodiment, several large spheres may be used instead